



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,830	02/22/2006	Kenneth J Hsu	6661/PCT	3183
6858 7590 12/30/2008 BREINER & BREINER, L.L.C. P.O. BOX 320160 ALEXANDRIA, VA 22320-0160				
EXAMINER				
HRUSKOCI, PETER A				
ART UNIT		PAPER NUMBER		
1797				
MAIL DATE		DELIVERY MODE		
12/30/2008		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/564,830

Applicant(s)

HSU, KENNETH J

Examiner

/Peter A. Hruskoci/

Art Unit

1797

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 September 2008 and 15 December 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7, 8 and 13-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 is/are allowed.
- 6) ☒ Claim(s) 7, 8 and 13 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 7 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/21115 Bellinger et al. in view of Adey 5,851,398. Bellinger et al. disclose (see pages 3-6) a process for suppressing growth of green algae substantially as claimed. The claims differ from Bellinger et al. by reciting that the carbon dioxide is produced by burning of fossil fuels or lime. Adey disclose (see col. 12 line 52 through col. 3 line 16) that it is known in the art to adjust the pH of water with carbon dioxide gas produced at a fossil-fuel burning facility. It would have been obvious to one skilled in the art to modify the process of Bellinger et al. by utilizing the recited carbon dioxide in view of the teachings of Adey, to aid in acidifying the water.

Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over WO 93/21115 Bellinger et al. in view of Adey as above, and further in view of Busch. The claim differs from the references as applied above by reciting that the aqueous system is waste water, and the waste water is acidified with the carbon dioxide prior to being emptied into a lake or river. Busch disclose (see col. 2 line 51 through col. 5 line 44) that it is known in the art to treat waste water effluent with carbon dioxide to reduce the pH prior to releasing the effluent to a disposal stream. It would have been obvious to one skilled in the art to modify the references as applied above by treating the recited waste water in view of the teachings of Busch, to aid in acidifying the waste water and suppressing algae growth prior to release into a lake or river.

Claim 16 is allowed.

Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant argues that Bellinger does not teach or suggest recovering carbon dioxide from industrial produced waste containing carbon dioxide, in particular, not from the burning of fossil fuels or lime, as in the claimed process. It is submitted that Bellinger discloses on page 3 that the pH modifying agent can be a purified industrial gas such as carbon dioxide. It is further submitted that Adey as applied above was used to teach that it is known in the art to adjust the pH of water with carbon dioxide gas produced at a fossil-fuel burning facility. Furthermore, the specific source of carbon dioxide utilized, would have been considered an obvious matter of process optimization to one skilled in the art, depending on the specific water treated and results desired, absent a sufficient showing of unexpected results.

Applicant's arguments concerning Busch are based on the propriety of Bellinger, which is deemed properly applied with Adey, for reasons stated above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Peter A. Hruskoci/ whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 8:00AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1797

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Peter A. Hruskoci/
Primary Examiner
Art Unit 1797

12/24/08